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ABSTRACT

Objectives, challenges, and needs of an educational research and development center at Riyadh University, Saudi Arabia are discussed. Major objectives of the center are to cooperate with the ministry of education and other agencies in conducting projects, to foster research projects of qualified individuals, and to exchange information and experiences with similar international organizations. Problems of the institution include controversy over the nature of educational research, the nature of educational improvement and the stereotypical perceptions of educational research and researchers held by practitioners. Solutions include providing a broader definition of educational research, focusing on problems critical to practitioners, and viewing educational improvement as a comprehensive project. Ways to meet these challenges include institutionalizing educational research in every Arab nation; coordinating programs among the nations; understanding the variables which influence education such as psychology, economics, sociology, and anthropology; and to promptly report outcomes of research to practitioners. (KC)

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The Educational Research Center, Riyadh University: Objectives and Challenges

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I. Introduction

Educational systems all over the world are beset by enormous challenges. Today's educational problems are so severe that some critics, from a variety of orientations, advocate the abolition of schooling, the establishment of alternative and more adequate systems, or, at least, the making of fundamental changes in all aspects of contemporary education: objectives, organization, content, teachers' preparation, procedures of instruction, and so on. The writings of scholars such as James Coleman (Equality of Educational Opportunity [1966]), Ivan Illich (Deschooling Society [1971]), Paulo Friere (Pedagogy of the Oppressed [1970]), Jerome Bruner (The Relevance of Education [1970]), UNESCO (Learning to Be [1972]), Adam Curle (Education for Liberation [1973]), and Martin Carnoy (Education as Cultural Imperialism [1974]) are cases in point.

Furthermore, the view that has been adopted during the Development Decade of the Sixties regarding education as an instrument for social change, equality, and the growth of the national income, in general, and in developing nations in particular has fallen far short of expectations. Consequently, the theorizing about development processes and the relationship of education to development began to

change drastically during the early 1970's.(1)

The need for the development of today's education is widely expressed at all levels: national, regional and international. As a response to this need there has been an explosion of interest in the establishment of educational research and development institutions.

The intent of this paper is to describe the objectives set for Riyadh University's Educational Research Center (ERC) in Saudi Arabia and to present some of the challenges facing this Center. The task undertaken herein is both descriptive and conceptual in nature. The ultimate aim of this paper is to express what this writer believes to be essential and of first priority in education as a profession; namely, a productive dialogue between educators all over the world and between educational researchers in particular. Such a dialogue, I submit, will be a great help to the development of education as it has been for the development of other professions.

II. The Center's Milieu and Structure

Riyadh's Educational Research Center is functioning within the educational system of Saudi Arabia. A brief description of this system is in order. Formal education in Saudi Arabia is growing at an unprecedented rate in terms of enrollment, number of teachers in preparation and proportion of national budget for expenditures. The administration of general education (pre-university) for boys is lodged in the Ministry of Education and three regional directorates. It encompasses the complex of primary, secondary, vocational,

special, and elementary teachers' training education. The educational system is linear; that is, success at one stage is measured, usually, by passing a semi-nationwide examination which provides access to the next stage. A parallel administration of general education for girls is the role of the General Presidency of Education for Girls. Higher education in Saudi Arabia is offered by six universities. Four of them are modeled, by and large, after Western institutions. Girls are accepted and taught separately in these universities in some fields of specialization. The General Presidency for Girls' Education also administers two colleges of education for women. Higher education is controlled by colleges and universities and coordination among them is assigned to the Ministry of Higher Education.

Education in Saudi Arabia, at all levels, is free of charge. Students, in addition, are provided by the government with busing, textbooks, housing, medical care, and a monthly cash stipend.

Riyadh University is the oldest and largest university in the Arabian Peninsula. Established in 1957, Riyadh University, at present, is comprised of eleven colleges including Arts, Administrative Sciences, Agriculture, Engineering, Education (Two: one in Riyadh, the capital, and one in Abha), Medicine, Pharmacy, Dentistry, Nursing, and the Arabic Language Institute.

Riyadh University's College of Education was established in 1967 as a joint project carried out through cooperation between the government of Saudi Arabia and UNESCO. One year later it became one of Riyadh University's Colleges. The functions assigned to this college by its charter are the following: (1) the preparation of teachers for junior and

senior high schools: (2) participation in in-service education; (3) cooperation with the Ministry of Education in solving educational problems through research; (4) preparation of a cadre of educational researchers; (5)providing services to Saudi society in general and its institutions for development in particular; (6) development of educational cooperation between the Kingdom's educational institutions and their counterparts in the Arab and Muslim worlds and in other foreign countries.

Riyadh University's Educational Research Center was created in January, 1977. It was established to meet some of the major objectives set forth for the College of Education; especially to cooperate with the Ministry of Education in solving educational problems in schools and institutes through scientific educational research.

The Center is a part of the College of Education. It is headed by a Director appointed by the Council of the College after nominations have been offered by the Dean. The overall policy of the Center is formulated by an Executive Council presided over by the Dean as chairman. The Council's membership is constituted of elected members as representatives of the following departments: Islamic Studies, Educational Foundations and Administration, Psychology, Curriculum and Instruction, Art Education, and Physical Education. The Council also includes the Director of the Middle Directorate for Education which is the largest in the Kingdom and is seated in Riyadh.

III. Objectives and Preliminary Achievements

The mission of the Center consists of working toward three central objectives: (1) to cooperate with the Ministry of

Education and other educational agencies in conducting research and development projects; (2) to carry out programmatic research and foster the research projects of qualified individuals; (3) to exchange information and experiences with similar organizations within the Kingdom and abroad.

Although the Center is still in its infancy a number of projects are either underway or have been recently completed. (These include error analysis of Saudi freshmen's English; analysis of errors in Arabic spelling and writing of elementary grades; patterns and habits of reading of secondary school students; translation and field-testing of several psychometric instruments; a major development project done in cooperation with Riyadh's leading private school; several conceptual works which have been presented abroad; and so on.

IV. Challenges

The challenges confronting the Center are many. They can be conceptualized as exogenous and autogenous challenges. The former may be viewed as those challenges coming from current controversial issues in educational theory and practice and in educational research in particular. The latter can be seen as those specific challenges coming from the milieu in which the Center is functioning. However, these two categories are not mutually exclusive or inclusive. Epistemologically, they are overlapping and it is, therefore, better to present them without taxonomization and regardless of their possible original causes.

A. The First Challenge- Educational Research:
What Is It? For What Purpose Does It Exist?

The nature of educational research is questioned explicitly

and implicitly by many of the people who are concerned with it within the university and outside of it, and especially by those who have had their training in the U.S.A. The extremist point of view held by many scholars in the U.S.A. in which educational research is thought of as identical to research in natural science is one of the difficulties facing our Center. This difficulty is worthy of discussion particularly in the context of developing countries.

Kerlinger, for example, in his Presidential Address to AERA asserted the following:

> *The basic purpose of scientific research is theory. ...the purpose of scientific research is to understand and explain phenomena.
>
> *A theory presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena.
>
> *There is little connection between research and educational practice.
>
> *The researcher is pre-occupied with, and should be pre-occupied with, variables and their relations. He should never be required to think about or spell out the educational implications of what he is doing or has done.
>
> *Such phenomena as action research, targeted research, programmatic research and, in Europe, emancipation research are mostly bizarre nonsense, bandwagon climbing, and guruism little related to what research is and should be. (2)

The foregoing quotation can be considered as the decree of an influential scholar. It is one example of what educational research is and what its purpose should be.

The assumptions underlying such a decree are unsubstantiated. These assumptions are related to various concepts employed

in this crusade-like movement in which science, theory, practice, and research are interpreted in terms of a very narrow and traditional paradigm. Science is taken to mean essentially the natural sciences. Every other science should be modeled after natural sciences whether in knowledge production, acquisition, or utilization. Unfortunately, this paradigm has a great influence on those who are termed by Bernstein as "mainstream social scientists," including educational researchers.

A new perspective for science and the scientific method has been presented persuasively by many scholars, from a variety of orientations. The writings of Michael Polanyi, Thomas S. Kuhn, Jacob Bronowski, and Erich Jantsch, to mention a few examples, repudiate the traditional paradigm for science and scientific research. Details of the new perspective for science and scientific research are beyond the scope of this paper and cannot be fully explained herein. However, an idea of the emerging perspective for science and scientific research may be formulated from the following.

Production, acquisition and utilization of all types of knowledge--"knowing how," "knowing what," and "knowing-where-to"--are always for human purposes. Traditional knowledge cast into the form of closed models of science constitute a useful, but by no means sufficient, tool for dealing with matters of human design and a human world.(3) Paradigms of physical and social science, artistic expression, mystical insight and psychic revelatory processes should be taken seriously and in balance as modes of holistic insight.(4) Science, if it is thought of in terms of the objectifying model of natural science, is a closed system. Knowledge formulated according to the natural science model

constitutes the lowest level in a hierarchy of knowledge for human purpose.(5) The state of scientific affairs has shown clearly that science indicates, happily, that science is not a closed system.(6) In science, we can employ the scientific method in a narrow sense; namely, to confine it to induction and deduction. But the mutations in the paradigms transcend that now often-used mechanism in "normal science", to employ Kuhn's terminology. "The successive transition," Kuhn says, "from one paradigm to another via revolution is the usual developmental pattern of mature science."(7) Mutations in paradigms emerge from intuitive or revelatory processes.(8) The act of imagination is the opening of the scientific system so that it shows new connections between things which were thought of as unrelated.(9) At this point one is justified in concluding that this conceptualization of science and scientific research should lead to a new shift in paradigms. This shift should be used as a new orientation for research in both social and applied sciences including education.

Let me turn to the assertions made by Kerlinger when he says, "The basic purpose of scientific research is theory," and "There is little connection between research and educational practice." These propositions represent a widespread, fallacious dichotomy in which theory is put versus practice. It is one of the main sources of confusion in educational research in both its nature and purposes. Dewey addressed himself to this dichotomy fifty years ago by saying that theory is in the end the most practical of all things.(10) Nothing repudiates the notion of theory versus practice in education better than Dewey's original vision:

> To suppose that scientific findings decide the value of **educational** undertakings is to reverse the real case. Actual activities in educating

> test the worth of scientific results. They may be scientific in some other fields, but not in education until they serve an educational purpose, and whether they really serve or not can be found only in practice. (11)

Advocating the natural science model for research in social science and in praxiological sciences including education implies that social and educational phenomena are identical to natural phenomena. But they are not. Findings of research in natural science may be claimed to be valid independently of place, time and circumstances. The application of the natural science model for educational research means that in education we can establish once and for all the conditions for the correct order in educational objectives, curriculum, and instruction, administration and school organization. In doing so, human behavior is to be considered only as the material for science regardless of ethical, social, developmental and historical situations.(12)

Viewing educational research in the strict sense adopted in empirical-naturalistic research has led to what Coladarci terms "scientific disease" as demonstrated by the insistence on over-control of variables and reliability of measurement at the expense of relevance of data to the real problems in education. Doing educational research only in terms of basic research entails that research should be confined to testing theory-derived hypotheses. "In such a model," Coladarci says, "the major independent variables are rigorously defined, and all other possibly influential variables are controlled or ignored (by randomization)."(14) Insisting on reliability means the validation of the research findings through statistical significance testing. The case against this approach has been developed in recent years. Depending on his own work

and on the work of others, Carver writes:

> Statistical significance testing involved more fantasy than fact. The emphasis on statistical significance over scientific significance in educational research represents a corrupt form of scientific method. Educational research would be better off if it stopped testing its results for statistical significance.(15)

The foregoing discussion should not be interpreted as a call for the abolition of basic research. What is intended here is a call for the avoidance of narrowness in orientation in educational research. Educational research should not be rigidly defined. It should be broadly defined to include any activities that lead to a better understanding of educational problems and that produce findings relevant to practice. In educational research we should always look for the applicability of its findings, otherwise educational research will remain sterile and an "ivory-tower" exercise.

B. The Second Challenge: Stereotypical Views

The second challenge facing our Center may be considered as an extension and corollary of the first. Conceptualization of educational research in terms of the model employed in natural science and viewing research as having little connection to educational practice has resulted in a stereotypical view of research on the part of both researchers and practitioners. Specifically, the researchers simply assume that things are to be done to the schools. This means that schools and people in them are to be used as objects of and for research and development. Furthermore, practitioners are looked upon as passive, short-sighted, and unqualified for conducting research aimed at solving the schools' problems. As a result of this conception, a gulf has been created between researchers and the educational practitioner at all levels. This

writer vividly remembers one Minister of Education in Egypt insisting on shutting down all activities related to educational research and asserting publicly that there was no place for any Ph.D.-holder in the Ministry of Education. There were neither political nor personal reasons behind such an action. The main reason in that minister's mind, I submit, that research in education does not "pay off." Correspondingly, this writer has made an intensive interview with thirteen teachers and two administrators in Riyadh regarding their points of view toward educational research and researchers. The content analysis of their replies revealed some unfavorable and stereotypical views:

1. There is a strong feeling among those teachers and administrators that educational research has not helped schools to tackle the real problems facing them. This feeling was formulated by one teacher in his statement that "educational researchers are too involved in theoretical aspects and far away from the actual reality of classrooms."

2. Educational researchers are viewed by these teachers and administrators as idealists who are trying to employ ideas and arrangements which do not fit the Saudi environment. Furthermore, researchers are accused by some teachers of being dependent only of foreign ideas and theories. "Educational researchers," one teacher said, "should live in the school climate, know the actual problems, and then, and only then, try to work toward solving these problems.

Such perceptions of educational research and researchers on the part of the practitioners indicates that educational research does not focus attention on problems critical to practitioners in the field. In many cases, I submit, educational researchers are talking to each other and ignoring the practical implications of their research while these implications were the original objects for research. Pushing educational research away from the problems the

the practitioners consider important and critical is a major cause of the ineffectiveness of educational research. This idea is well explained in the following statement:

> Many academic scientists value the prestige that their contributions to basic research and theory give them in the eyes of their peers more than whatever rewards might be obtained from clients who would find their work useful. It is no wonder that university scientists prefer the kind of research that is satisfying in itself (because it is self-initiated and free of restraints) and leads not only to scientific knowledge, but also to respect and status tendered by those whose judgments they value most. It is no wonder, either, that their value systems are passed on to their students. Thus, much of the applied work in disciplinary departments is done by those who for one reason or another do not compete for the highest prizes of their disciplines. (16)

3. Educational research in the eyes of the interviewees is identified as a kind of evaluation of their efforts. Consequently, the fear of unfavorable evaluation generates reluctance, resistance, and hostility. One of the interviewed teachers said, "The educational researcher is like a traffic policeman. He is very concerned only with mistakes and criticism."

At this point one is justified in saying that educational researchers should think of the ways and means through which they communicate with practitioners. We need a linking strategy between parties concerned with education in order to prevent misunderstanding and mistrust. We should rethink the pervasive linear model of research and **development** in its sequential steps: research, **development,** dissemination, and adoption. Educational research may be improved by a crossing of professional and

organizational lines and by the involvement of practitioners--teachers and administrators--in all of the processes of educational research and development: problem choice, planning, development, implementation and evaluation.

C. The Third Challenge: Comprehensive Versus Piecemeal Development

Education in any country is better viewed as a total system surrounded by supra-systems: social, economic, and religious. Improvement of education cannot be achieved by development made in one or another component of the system. This fact is evident everywhere. One of the significant indications of this has come from the U.S.A. The National Science Foundation has commissioned a series of studies on teaching science, mathematics, and social studies in order to evaluate the efforts made in the last two decades on curriculum development in terms of "structure of discipline." No one should be surprised as he reads what was found: "Teachers of science, mathematics, and social studies seldom use the inquiry approach."(17) This, of course, was the essence of the efforts made in renewing the curriculum of these particular disciplines in the recent past. Furthermore, it was found that "Teachers rely on textbooks as the basis for curriculum and students spend their time processing the content of the textbooks in some way."(18) This example should convince us that in educational development we should give attention to all elements crucial to the system. To believe that improvements in education will spring from piecemeal improvement such as a new curriculum, a new method of instruction, programmed instruction or team teaching is naive. This is one of the dilemmas facing educational

systems in general and those of developing nations including the Arab Nations particular.

Education in the Arab states, including Saudi Arabia, has been analyzed in terms of various dimensions: social demands, population dynamics, input resources, objectives entrusted to it, and its "real" outcomes. Based on such analyses, it was found that education in the Arab countries is still far short of adequate quality and quantity.(19) The Arab League Educational, Cultural and Scientific Organization (ALECSO) has been occupied during the last five years with the preparation of a comprehensive strategy for Arab educational development.(20) The priorities set in this strategy are the following:

1. Development of basic education in order to achieve the principles of democracy and to remedy the problems of deprived areas. The development of basic education, according to this strategy, includes its structure, more opportunities for girls, content, illiteracy, and adult education.

2. Diversification of secondary education for the purpose of preparing technical cadres needed for comprehensive development.

3. Improving the quality of education through better preparation of teachers, improvement of in-service education, and the use of new instructional technologies.

4. Development of higher education in its objectives, structure, and content.

5. Development of educational administration.

Clearly, this strategy is calling for many things to be done and all to be done immediately. But how? It is a great dilemma.

This writer's perspective in response to that problem may be seen in the following propositions. Some of these propositions have been presented by this writer elsewhere.(21)

(a) It is time for all Arab nations to understand that educational development requires a great deal of time, numbers of qualified educational personnel, and a refined organizational structure. In other words, educational research must be institutionalized. A proportion of 4% or more of each ministry of education's budget should be assigned for educational R&D.

(b) Every Arab nation should have its own educational R&D institution. Each institution should be established as a joint project by the ministry of education and the national university(s). In so doing the dichotomy of perceiving university people as producers, and practitioners as consumers can be transcended. Educational R&D institutions should have autonomy and be freed from constraints of routine and bureaucracy. The first priority in every institution should be given to establishing the national educational R&D agenda in terms of a priority order. Our Center in Riyadh is currently occupied with this task.

(c) The newly established ALECSO unit of research should play a significant role in coordination the educational R&D programs to be undertaken by educational R&D institutions in order to prevent unnecessary overlap and repetitions. In other words there must be specialization and articulation among the educational R&D institutions in the Arab nations.

(d) Much has been already said in this paper about the suitable types of educational research, particularly for developing countries. It may be sufficient here to say that what is needed is a shift in emphasis in educational research from correlational and prediction studies to a more Gestalt-like study of the variables influencing education. In other words, in educational R&D efforts, we should go beyond the traditional discipline--namely, psychology--to a more effective interdisciplinary approach including economics, sociology, and anthropology. I am quite aware

of the requirements of such an approach, particularly the qualified personnel who are necessary for carrying it out. These requirements should reorient the efforts made by universities of preparing educational R&D cadres.

(e) Educational R&D institutions in the Arab nations should give great attention to timeliness in reporting research findings to all the parties concerned. There is rising doubt and skepticism toward educational research on the part of policy-makers,(22) administrators, and teachers. Perhaps such doubts and skepticism can be responded to by organizing educational R&D programs in terms of short-term, middle-range, and long-range projects and reporting their outcomes promptly.

Footnotes

1. See, for example, the following: (a) Harvard Educational Review, Vol. 45, No. 2 (May, 1975); and (b) Teachers College Record, Vol. 76, No. 4 (May, 1975).

2. F.N. Kerlinger, "The Influence of Research on Educational Practice," Educational Researcher, Vol. 6, No. 8 (September, 1977), pp. 5-12.

3. Erich Jantsch, Design for Evolution (New York: George Braziller, 1975), pp. XIII-XIV.

4. Ibid., p. XV.

5. Ibid., p. XIII.

6. J. Bronowski, The Origins of Knowledge and Imagination (New Haven and London: Yale University Press, 1978), p. 108.

7. T.S. Kuhn, The Structure of Scientific Revolutions (Chicago: University of Chicago Press, 1970), 2nd.ed., p. 12.

8. Jantsch, op.cit., p. 229.

9. Bronowski, op.cit., p.109.

10. John Dewey, The Sources of a Science of Education (New York: Liveright Publishing Corp., 1929), p. 27.

11. Ibid., p. 33.

12. See R.J. Bernstein, The Restructuring of Social and Political Theory (New York: Harcourt, Brace, Jovanovich, 1976), pp. 186-187.

13. Arthur Coladarci, "Philosophical Dimensions of Educational Research in Developing Nations," a speech presented at Riyadh University, December, 1978.

14. Ibid.

15. Ronald Carver, "The Case Against Statistical Significance Testing," Harvard Educational Review, Vol. 48 No. 3 (August, 1978), p. 378.

16. Behavioral and Social Sciences Survey Committee of the National Academy of Science, Behavioral and Social Sciences: Outlook and Needs (Englewood Cliffs, N.J.: Prentice-Hall, 1969), p. 93.

17. Association for Supervision and Curriculum and Development, News Exchange, Vol. 20, No. 5 (December, 1978) pp. 1-2.

18. Ibid.

19. M. A. El-Ghanam, "Future of Education in the Arab Countries," New Education, Vol. 1, No. 2 (April, 1974) in Arabic.

20. Arab League Educational, Cultural and Scientific Organization, Strategy for Arab Educational Development, (Cairo: ALECSO, 1977), in Arabic.

21. A. El-Mahdi Abdel-Halim, "Educational Development: Why? and How?" Studies (journal of Riyadh University's College of Education), Vol.1, No. 1 (Spring, 1978)in Arabic.

22. H.M. Levin, "Why Isn't Educational Research More Useful?" Prospects, Vol. 8, No. 2 (1978).